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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,131	09/26/2003	Yukiko Murasawa	03310/019002	6115

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EXAMINER

SHEWAREGED, BETELHEM

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 07/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/672,131

Applicant(s)

MURASAWA ET AL.

Examiner

Betelhem Shewareged

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-8, 10, 11 and 14-18 is/are pending in the application.
- 4a) Of the above claim(s) 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-8, 10, 11 and 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/6/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's response filed on 05/02/2005 has been fully considered. The Double Patenting rejections have been withdrawn in view of Applicant's submission of Terminal Disclaimer.
2. Claims 6 and 14 are amended, claims 1-5, 9, 12 and 13 are canceled, claims 16-18 are added, and 6-8, 10, 11 and 14-18 are pending. (NOTE: Claims 17 and 18 are withdrawn from consideration as non-elected invention).

Election/Restrictions

3. Newly submitted claims 17 and 18 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 17 and 18 are directed to method of making a recording sheet.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 17 and 18 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-8, 10, 11 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higuma et al. (US 5,059,983) in view of Iwamoto et al. (US 6,139,940) and Mori et al. (US 6,605,337 B1).

Higuma discloses a recording medium comprising a support, an ink retaining layer on the support, and an ink transporting layer on the ink retaining layer (abstract). The ink retaining layer is equivalent to the claimed ink receptive layer, and the ink transporting layer is equivalent to the claimed ink permeable layer. The ink transporting layer has a porous structure (col. 2, line 68), and comprises a particulate material and a binder (col. 3, line 4). The particulate material comprises silica (col. 3, lines 20-31). The mixing ratio of particulate materials to binder is preferably 10/1 to 1/2 (col. 3, line 47). The thickness of the ink transporting layer ranges from 5-150 μm (col. 6, line 33). The ink retaining layer comprises hydrophilic polymers such as gelatin, starch, polyacrylamide, polyvinylpyrrolidone, polyurethane, polyvinyl alcohol and polyester (col. 6, line 67 thru col. 7, line 14). The thickness of the ink retaining layer ranges from 1-30 μm (col. 7, line 15). The substrate can be made of polyester resin or glass plate (col. 7, line 19). The thickness of the substrate is 75 μm (col. 7, line 61). With respect to pore volume of the ink transporting layer, it is elementary that the mere recitation of newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. *In re Swinehart et al.*, 169 USPQ 226 at 229. Since the Higuma reference teaches all of Applicant's claimed compositional and positional limitations, it is inherent that the reference article

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function in the same manner claimed by Applicant. Higuma does not teach a polyester resin as the binder in the ink transporting.

Iwamoto teaches an ink jet recording sheet comprising a substrate, an ink absorbing layer on the substrate, and an ink impermeable layer on the ink absorbing layer (col. 1, line 63). The ink impermeable layer comprises a binder such as polyester (col. 2, line 40), and inorganic pigment such as silica (Examples).

Higuma and Iwamoto are analogous art because they are from the same field of endeavor that is the ink jet recording art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the ink impermeable layer of Iwamoto with the invention of Higuma in order to provide an ink jet recording sheet containing an ink transporting layer having hydrophilic properties which in turn prevents ink from being absorbed by the ink transporting layer.

With respect to claim 16, Higuma does not disclose having an aluminum hydroxide in the ink retaining layer.

Mori teaches an ink jet recording material comprising a substrate and an ink receiving layer on the substrate (abstract), wherein the ink receiving layer comprises a resin and particles. An example of the particles is aluminum hydroxide (col. 8, line 45).

Higuma and Mori are analogous art because they are from the same field of endeavor that is the ink jet recording art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the ink receiving layer of Mori with the invention of Higuma so as to provide a recording sheet containing an ink receptive layer having improved color density retention property (col. 7, line 63).

6. Claims 6-8, 10, 11 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. (US 5,027,131).

Hasegawa discloses a recording medium comprising a substrate, an ink retaining layer on the substrate, and an ink transporting layer on the ink retaining layer (col. 3, line 66 thru col. 4, line 5). The ink retaining layer is equivalent to the claimed ink receptive layer, and the ink transporting layer is equivalent to the claimed ink permeable layer. The substrate can be plastic film such as polyethylene terephthalate, polyester, celluloid and polyvinyl chloride, or glass plate (col. 4, line 9). The thickness of the substrate ranges from 1-5000 μm (col. 4, line 19). The ink transporting layer has a porous structure (col. 4, line 45), and comprises particles and a binder (col. 4, line 55). Silica is used as the particle ink the ink transporting layer (col. 4, line 67). The mixing ratio of particulate materials to binder is preferably 1/5 to 50/1 (col. 6, line 25). The thickness of the ink transporting layer ranges from 1 to 300 μm (col. 6, line 37). The thickness of the ink retaining layer ranges from 1-70 μm (col. 7, line 14). The ink retaining layer comprises hydrophilic polymer such as gelatin, starch, polyamide, polyacryl-amide, polyvinylpyrrolidone, polyurethane, polyvinyl alcohol and polyester (col. 7, lines 17-31). With respect to pore volume of the ink transporting layer, it is elementary that the mere recitation of newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. *In re swinehart et al.*, 169 USPQ 226 at 229. Since the Hasegawa reference teaches all of Applicant's claimed compositional and positional

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limitations, it is inherent that the reference article function in the same manner claimed by Applicant. Hasegawa does not teach a polyester resin as the binder in the ink transporting.

Iwamoto teaches an ink jet recording sheet comprising a substrate, an ink absorbing layer on the substrate, and an ink impermeable layer on the ink absorbing layer (col. 1, line 63). The ink impermeable layer comprises a binder such as polyester (col. 2, line 40), and inorganic pigment such as silica (Examples).

Hasegawa and Iwamoto are analogous art because they are from the same field of endeavor that is the ink jet recording art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the ink impermeable layer of Iwamoto with the invention of Hasegawa in order to provide an ink jet recording sheet containing an ink transporting layer having hydrophilic properties which in turn prevents ink from being absorbed by the ink transporting layer.

With respect to claim 16, Hasegawa does not disclose having an aluminum hydroxide in the ink retaining layer.

Mori teaches an ink jet recording material comprising a substrate and an ink receiving layer on the substrate (abstract), wherein the ink receiving layer comprises a resin and particles. An example of the particles is aluminum hydroxide (col. 8, line 45).

Hasegawa and Mori are analogous art because they are from the same field of endeavor that is the ink jet recording art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the ink receiving layer of Mori with the invention of Hasegawa so as to provide a recording sheet containing an

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ink receptive layer having improved color density retention property (col. 7, line 63 of Mori).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

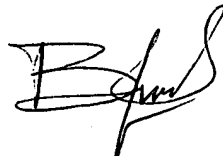
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 571-272-1529. The examiner can normally be reached on Mon.-Fri. 8:00AM-4:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

B.S.
July 24, 2005.



BETELHEM SHIWAREGED
PRIMARY EXAMINER